

Chief Civil Engineer : H.O.

Manager : Ballivor.

GH/JK

DH/AK.

Silt Control

9th May, 1984.

Below are figures for numbers of excavator hours spent at present and estimates of future excavator requirements as requested by the General Operations Manager.

In 1983/84 210 Hymac hours were spent in installing our first silt ponds.

The following is a table of expected numbers of Hymac's required at Ballivor works for silt control in the next few years.

<u>Year.</u>	<u>Pond Excavation</u>	<u>Pond Maintenance</u>	<u>Total</u>
1984/'85.	0.11 Hymac Year	0.08 Hymac Year	0.19 Hymac Yr
1985/'86.	0.14 " "	0.30 " "	0.44 " "
1986/'87.	0.10 " "	0.60 " "	0.70 " 2
1987/'88.	0.00 " "	0.81 " "	0.81 " "



Manager.

BORD NA MÓNA

Don..... <i>Manager Ballivor</i>		On..... General Operations Manager	
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LUATEAR AN UIMHIR EAGARCA		Re: Silt Control	16/4/'84

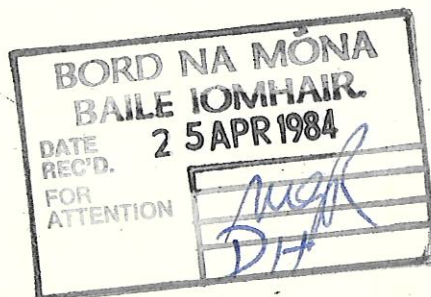
I attach a copy of report on the silt control meeting held at Derrygreenagh on 4th April 1984. You should submit the following information to the Chief Engineer:-

- (a) The annual number of excavator hours (specifying excavator type) spent at present on silt control at your works.
- (b) The expected annual number of excavator hours which would be required in complying with Board Policy in this regard i.e. all effluents flowing through silt traps of standard size.


General Operations Manager

GH/JK
ENC.

c.c. Chief Engineer



Meeting on Silt Control held at
Derrygreenagh on 4th April 1984

Present:

Chairman - Mr. S. Grogan - General Operations Manager

Mr. H. Flood	- Chief Engineer	Mr. J. Doyle	- Group Manager West
Mr. B. Keville	- Manager, Mech. Eng. Services	Mr. H. Hickland	- " " East
Mr. J. Welsby	- Head Civil Works	Mr. J. Hughes	- " " Briquett
Mr. G. Hannon	- Civil Works	Mr. P. Hughes	- Manager Blackwater
		Mr. E. Moore	- " Derryfadda
		Mr. M. Kelly	- " Derrygreenagh
		Mr. S. McCabe	- " Littleton
		Mr. T. Quinn	- " Mountdillor
		Mr. L. Concannon	- " Oweninny
		Mr. D. Wynne	- Prod. Eng. Boora

Mr. P. Coffey - Scientific Officer

Mr. C. O Gogain - Manager Lullymore was unavoidably absent

Acceptable Standards of Effluent:

Legal interpretations of the 1977 Water Pollution Act and the various Fisheries Acts suggest that Bord na Mona is not legally obliged to treat bog run-off. These interpretations have not been tested in court nor have they been widely publicised.

Notwithstanding the question of our Statutory obligation, Works should meet their responsibilities towards the provision of acceptable bog effluents in accordance with Board Policy. To comply with this policy all bog and factory effluents should be directed through silt traps before discharge to external waterways.

In attempting to set reasonable standards it is to be noted that there are no clear-cut standards which might be imposed on us in the absence of our "exemption". This vague situation is made more so by the virtual autonomy of individual local authorities in this respect. However, a precedent has been set by An Bord Pleanála's decision in the case of the licencing of effluent discharge from Littleton Briquette Factory when an upper limit of 100 mg/l suspended solids concentration was set. Although the legalities regarding obligation to treat bog effluent and briquette factory effluent may be dissimilar the waste involved is similar. It would, therefore, seem reasonable to assume that a target value of 100 mg/l in the case of bog effluent would satisfy potential complainants whose complaints are based on genuine dissatisfaction with the present standard of our effluents.

Method of Achieving Standards:

No single method of silt trapping (i.e. pond cleaned by excavator; pond initially constructed by excavator and cleaned by pumping; or lagoon) will provide a solution at every outfall to be treated.

Where an area of land exists which seems particularly suited to the provision of a lagoon the area should be examined (i.e. contours, capacity, embankment material availability, land acquisition, pumping, seepage, safety etc.) and the cost of its provision and maintenance compared with that of orthodox silt ponds.

A system for emptying of ponds by pumping should be fully developed and tested on a project basis. The costing of the pumping method as outlined in the Silt Control Study - December 1983 should be viewed as an estimated cost for a proposed but as yet untried system (ref. Silt Control Study Dec. 1983 - Chapter 3 paragraph 4).

Cost of Silt Control

- Bearing in mind:
- (a) the absence of statutory obligation
 - (b) that untreated similar effluents attract differing degrees of complaint.
 - (c) the autonomy of bodies responsible for enforcement of regulations.

expenditure to provide less than 100 mg/l suspended solids concentration at all outfalls may be unwarranted except where we are discharging into spawning rivers which are particularly sensitive to siltation, e.g. the Cladiagh (Monettia) and the Shiven (Derryfadda).

In the absence of complaint it might be assumed that an effluent is acceptable. Priority given to individual outfalls could be based on the acceptability of their effluents measured by the number and degree of complaints. ~~Control~~ of expenditure consistent with producing an acceptable standard of effluent is the responsibility of works management. ~~X~~

At present, total expenditure on silt is not readily quantifiable and as a starting point in increasing the efficiency of expenditure, budgetary separation of all silt-related costs is essential.

Design of Silt Ponds

Ponds should be provided in accordance with the recommendations outlined in the Silt Control Study - December 1983.

- i.e. Sludge Capacity = 525 cu. ft./nett acre
- Top Width = 27 ft.
- Min. depth below water level = 3 ft. 6 ins.
- Length = 1.8 yds./nett acre of catchment.

3.

Pond inlets and outlets should be at the same level. A wall of undisturbed material should be left across the full width of the pond at an approximate distance of two thirds the length of the pond from the inlet. The top width of this wall to be 6 to 12 inches below the water surface level.

On the above basis machine requirements are estimated at:

- Referred
from Silt Control
Study No 1
Dec. '83*
- 1 Hymac/1800 nett acres for maintenance
 - 1 Hymac/3600 nett acres for initial excavation.

G/
CH/CH
16.4.1984